Postal Regulatory Commission
Submitted 9/5/2017 4:03:37 PM
Filing ID: 101479
Accepted 9/5/2017

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

Inquiry Concerning City Carrier Costs	Docket No. PI2017-1

RESPONSES OF THE UNITED STATES POSTAL SERVICE TO QUESTIONS 1-9 OF CHAIRMAN'S INFORMATION REQUEST NO. 3

The United States Postal Service hereby provides its responses to the above-listed questions of Chairman's Information Request No. 3, issued on August 29, 2017. Each question is stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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September 5, 2017

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1. In its Response to CHIR No. 2, questions 6(a)-(b), the Postal Service provided a table that lists the Time and Attendance Collection System (TACS) city carrier street hours for two pay periods of each quarter of fiscal year 2016 (FY 2016). Please refer to that table in answering the following questions.

a. For each quarter, please specify which dates encompass the "two pay periods."

b. For each quarter, please specify how the two chosen pay periods were selected.

c. The table shows that quarter 1 of FY 2016 had the lowest number of TACS Labor Distribution Codes (LDC) 23 city carrier street workhours. However, in Docket No. ACR2016, the Postal Service states that total city carrier Special Purpose Route (SPR) costs were at their highest in FY 2016 during quarter 1.[1] Please explain.

d. In Docket No. ACR2016, the Postal Service found a national total of over 17 million workhours logged to LDC 23.[2] Please describe, and show by quarter, craft, office, and street workhours, how the LDC 23 city carrier street workhours provided in the table were derived.

RESPONSE:

a. The following table has the requested information.

FY	PQ	Pay Periods	Dates
2016	1	FY15 17-18	July 25, 2015 - August 21, 2015
2016	2	FY16 23-24	October 17, 2015 – November 13, 2015
2016	3	FY16 3-4	January 23, 2016 – February 19, 2016
2016	4	FY16 10-11	April 30, 2016 – May 27, 2016

b. The sampling frame for CCCS-SPR is generated five weeks prior to the beginning of a new quarter, similar to the other quarter-based sampling systems.

[1] Docket No. ACR2016, Responses of the United States Postal Service to Questions 1-15 of Chairman's Information Request No. 13, February 10, 2017, question 6(c).

[2] Docket No. ACR2016, Responses of the United States Postal Service to Questions 1-2, 4-9, 11-13, 15-19, 23, 28, and 31-33 of Chairman's Information Request No. 3, January 13, 2017, Excel file "ChIR.3.Q.1.LDC.Workhours.xlsx."

This provides sufficient time for the generation and review of samples before national release, and also sufficient time for all districts to prepare schedules for data collectors to conduct those tests. The TACS data from the two pay periods that are available at that point in time are used as the input for generating the CCCS-SPR sample file for the upcoming quarter. This means the TACS data for any given quarter may have been recorded up to 10 weeks prior to the start of the quarter. This statistical study design of CCCS-SPR is described in more detail in Docket No. ACR2016-FY16-34 at 17.

c. As noted in the response to part (a) of this question, when the sample file for FY2016 Quarter 1 was drawn, the underlying TACS data were based on pay periods 17 and 18 from quarter 4 of FY2015. These are the hours reflected in the table for CHIR No. 2 question 6(a) and 6(b). In contrast, the cited response in ACR2016 was intended to report on the costs associated with the actual accrued hours from FY2016 Quarter 1, which are not comparable. The accrued hours are much higher for multiple reasons. First, the accrued hours reflect roughly 7 pay periods worth of hours, while the sample table reflects only 2 pay periods. Second, the accrued hours took place during Quarter 1 of FY2016, which is peak season. In contrast, the sample TACS hours took place in Quarter 4 of FY2015, which is not during peak season. Peak season typically has the highest accrued TACS hours for SPR. These reasons explain why the sample TACS hours are the lowest for FY2016 Quarter 1, while the accrued TACS hours for FY2016 Quarter 1 are the highest. Note that it is the hours actually incurred in Quarter 1 that are used for post-stratification and estimation of Quarter 1 costs, not the subset of hours from the previous quarter that was used to generate the original samples. Accordingly, the weighted volume for PQ1 is higher than for the other quarters, so PQ1 CCCS-SPR estimates carry a larger weight in the annual distribution factors which are used to assign relevant SPR costs to products.

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d. The following table reflects the TACS LDC23 workhours for FY2016 by quarter, carrier subcategory, and by office versus street clocking status.

FY 2016 TACS LDC 23 workhours by Postal Quarter, Carrier Subcategory and Clocking Status

Postal Quarter	CarrierSubgroup	Office/Street	Workhours
1	**FullTimeRegular**	Office	256,217
		Street	2,661,694
	Transitional/PartTime	Office	367,075
		Street	2,918,875
Q1 Total			**6,203,861**
2	**FullTimeRegular**	Office	205,918
		Street	1,401,265
	Transitional/PartTime	Office	320,181
		Street	1,849,635
Q2 Total			**3,776,999**
3	**FullTimeRegular**	Office	193,208
		Street	1,273,873
	Transitional/PartTime	Office	295,880
		Street	1,674,055
Q3 Total			**3,437,017**
4	**FullTimeRegular**	Office	196,097
		Street	1,302,083
	Transitional/PartTime	Office	306,455
		Street	1,792,765
Q4 Total			**3,597,400**
FY2016 Total			**17,015,277**

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2. Please specify the typical time interval between when a City Carrier Cost System –Special Purpose Route (CCCS-SPR) sample is drawn and when the first data point from that sample is taken.

RESPONSE:

As noted in the Response for Question 1 of this Information Request, and on page 17 of Docket No. ACR2016 USPS-FY16-34, the CCCS-SPR sample is selected approximately 5 weeks prior to the beginning of the quarter. The first data point from that sample can be taken on the first day of the quarter. This makes the typical time interval between when a City Carrier Cost System – Special Purpose Route (CCCS-SPR) sample is drawn and the first data point roughly 37 days.

In FY 2016 Q1, for example, the two pay periods utilized are from dates July 25th – August 21st 2015. TACS data becomes available the Wednesday following the end of the pay period, which would be August 26th 2015. If we assume that the sample was generated on that day and that there was a randomly assigned sample on the first day of the quarter (Q1 data collection began October 1st 2015), that leaves 36 days between when the sample was drawn and when the first data point from that sample was taken.

Similarly, we can calculate the days for quarters 2, 3 and 4 in FY 2016. These are 44, 37 and 30 days, respectively. These average to roughly 37 days between when the sample is generated and the date when the first data point of that sample is taken.

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3. Please specify the typical time interval between when a CCCS-SPR sample is drawn and when the last data point from that sample is taken.

RESPONSE:

In response to question 2 of this Information Request, it was determined that, on average, an interval of 37 days occurred between the selection of the CCCS-SPR sample and collection of the first data point of that sample. Given that on average there are 91 days per quarter, and under the assumption that some data are still being collected on the last day of the quarter, the typical time interval between the selection of the CCCS-SPR sample and the last data point from that sample is the sum of 37 and 91, or 128 days.

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4. Please refer to the CCCS-SPR Statistical Documentation provided in Docket No. RM2009-10.[3]

a. Please provide any updates or revisions to the CCCS-SPR documentation provided in Docket No. RM2009-10.

b. Please explain how the CCCS-SPR sample frame accounts for varying route designations and day-specific routes.

RESPONSE:

a. There are no updates or revisions to the CCCS-SPR Documentation provided in Docket No. RM2009-10.

b. The CCCS-SPR sample frame accounts for varying route designations and day-specific routes by scaling the sampled SPR routes to the cost control total generated for all SPR routes by IOCS. The CCCS-SPR sample frame incorporates all established SPR routes. If a route designation is adjusted or altered on a specific day, CCCS would capture this adjustment. If a new SPR route is created for one specific day, this route would not be incorporated in the CCCS-SPR sample frame.

[3] *See* Docket No. RM2009-10, Petition of the United States Postal Service Requesting Initiation of a Proceeding to Consider Proposed Changes in Analytical Principles (Proposals Three – Nineteen), file "Prop.8.Appendix.CCCS_SPR_Documntatn.pdf," July 28, 2009.

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5. Please describe how mail collected from customer receptacles is handled and how and where it enters the mail stream.

RESPONSE:

The proper procedures that a carrier uses to handle collected mail from customer receptacles is detailed in the Postal Operations Manual (POM) Section 663 and is reproduced below.

663.4 **Mail Collection**

Mail matter properly stamped and placed in a mail receptacle for dispatch is collected by the carrier and deposited in the next Post Office at which the carrier arrives, unless otherwise directed by the Postal Service. Mail collected on the route and addressed for delivery on that part of the route still to be covered before reaching the next Post Office is delivered on the day of collection. The carrier cancels the stamps before delivery by writing across them the name of the Post Office last served, state, date, and number of the route. Bulky mailable matter, properly prepared and stamped, is collected by the carrier if it has been placed on or near the receptacle. Money left in mail receptacles for the purchase of stamps is left at the customer's risk.

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6. Please confirm that the Delivery Operations Information System (DOIS) is the source of the street hours data used as the dependent variable in the top-down regressions presented in the Postal Service's Status Report on the Top-Down Equation.

a. If not confirmed, please indicate the source of the street workhours data.

b. Please indicate whether the DOIS operational dataset also contains data on street workhours logged by city carriers on SPRs.

RESPONSE:

a. Confirmed.

b. The DOIS operational dataset contains some data for street workhours logged by city carriers on SPR, however the data are not nearly complete. There are far fewer hours in DOIS than there are recorded in TACS. Hence, DOIS is not a reliable source for SPR workhours.

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7. Please refer to Table 1 in the Postal Service's Status Report on the Top-Down Equation.[4] For the table's terms DPS, FSS, Sequenced, and Cased, please describe:

a. In general terms, the mail shape composition (*e.g.*, letters, flats, or parcels) for each term;

b. For each term and shape, how is it handled during delivery by a typical city carrier. Please indicate in your response how each type of mail and shape differs from the three other types referenced in this question; and

c. Please indicate the reasons why the marginal time associated with these four types of mail would be expected to differ.[5]

RESPONSE:

a. Please note that the delivery bundle terms referenced in the question are the exact ones that both UPS and the Postal Service analyzed in Docket No. RM2015-7. In fact, the cited footnote refers to the delivery time model estimated in that case.[6]

> The appropriate volume cost drivers should reflect this bundle structure and include all city carrier delivered letters and flats. There are volume bundles for DPS mail, cased mail, sequenced mail, FSS mail, and mail collected from customers and these five types of mail are the volume cost drivers. Note that cased mail includes both letters and flats, which are cased together and pulled down into one bundle or container. In addition, there are some pieces which may be classified as packages by the DMM, but are handled as flats by city carriers. These pieces are included in cased mail.

[4] Status Report on the Top-Down Equation at 6.

[5] Status Report on the Top-Down Equation at 8.

[6] See, Report on the City Carrier Street Time Study, USPS-RM2015-7/1, Docket No. RM2015-7, at 22.

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Delivery Point Sequencing (DPS) is performed on letter shaped mail, thus DPS mail generally contains letters. The Flats Sequencing System (FSS) is used to sort flats. FSS mail, therefore, generally contains flats. Sequenced mail generally can contain letter or flats. Cased mail generally contains letters, flats, and parcels handled as flats.

b. During delivery, all of the "bundles" or types of mail are transported by city carriers, either through driving or walking to the delivery point. That transportation includes both traversing the core portion of the route and deviating, or slowing down, to access the delivery point. Once at the delivery point, the mail is identified, prepared for delivery, removed from the carrier's satchel or from the relevant mail container, and inserted into some type of delivery receptacle:[7]

> The volume cost drivers should reflect the way the mail is handled on the street. In city carrier delivery, mail is handled in separate bundles on walking routes and in separate containers on driving routes. Mail is selected from these bundles or containers for placement in the mail receptacle. In other words, these bundles or containers define how mail is handled on the street and these handlings generate regular delivery time. Regular delivery time includes the collection of mail from customers' receptacles. It does not include the collection of mail from street letter boxes. That time is included in another cost pool. In this section, the terms "collection volume" or "volume collected" always refers to mail volume collected from customers' receptacles and not from street letter boxes.

c. The marginal time for a piece from any bundle of mail reflects the additional time required to handle that type of piece on the street. This additional time can arises for

[7] Id. at 21.

different reasons. First, a piece of mail may cause a carrier to slow down for, or deviate to, a mail receptacle. That causes additional time. Second, a piece of mail may cause the carrier to retrieve mail from a bundle or container and to insert that mail in the receptacle. This also causes additional time. Differences in marginal times for different types of mail thus reflect different propensities to cause accesses, different times associated with those accesses, and different times associated with preparing the mail for delivery and inserting the mail into a receptacle.

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8. In the Postal Service's Response to CHIR No. 1, the Postal Service stated that "[i]t is important, therefore, to ensure that only those parcels and accountables associated with city carrier letter route street time were included in the data set." It explains further that this is the reason it attempted to match street hours and Product Tracking and Reporting (PTR) volumes at the route level. Response to CHIR No. 1, question 1. However, due to inconsistencies between the PTR and DOIS at the route level, it collected PTR parcel and accountable data at the ZIP Code level, "so they could be matched with DOIS data at the ZIP Code level." *Id.*

a. Please explain whether the PTR parcel and accountable data that are included in the dataset used in the top-down regressions include parcel and accountable volume data for parcels that were delivered on special purpose routes.

b. Please explain whether the workhours data included in the dataset that formed the dependent variable included street workhours for regular delivery routes only, street workhours for regular delivery routes plus special purpose routes, or for some other set of routes.

RESPONSE:

a. The data do not include volume delivered on special purpose routes. The top-down model is an attempt at estimating variabilities for city carrier letter route street time, not SPR route street time. Thus, it is appropriate to include only the volumes delivered by regular letter carriers.

b. The data include street hours for regular delivery routes only. The top-down model is an attempt at estimating variabilities for city carrier letter route street time, not SPR route street time. Thus, it is appropriate to include only street time incurred by regular letter carriers.

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9. In its Status Report on the Top-Down Equation, the Postal Service states that "[t]he estimated coefficients for the complete model were provided in the Postal Service's Report on City Carrier Street time submitted in Docket RM2015-7 and the estimated coefficients for the reduced model are presented in Table 1."[8] Please provide the input files and programs for the:

a. complete model; and

b. reduced model.

RESPONSE:

a. The data and program for the complete model were provided in Docket No RM2015-7. The data and program named "doiscv.sas7bdat" and "estim-variab_reg_del_time.sas" respectively were provided in USPS-RM2015-7/1.

b. As explained in the report, the program for the reduced model is the same program that was used for the complete model, but with the collection mail volume removed from the estimating equation. For convenience, the program for the reduced model is provided below.

```
*USPS-RM2015-7/1 - Proposal Thirteen;

libname regdeliv 'D:\Regular_Delivery_Equation\SAS_Data_Sets';
data adoiscv;
set regdeliv.doiscv;
rdor=residential other;
rcbu= residential cbu;
rcrb= residential curb;
rcen=residential_central;

bdor=business other;
bcbu= business cbu;
bcrb= business curb;
bcen=business_central;
```

[8] Status Report on the Top-Down Equation at 5.

```
rd=rdor+rcbu+rcrb+rcen;
bd=bdor+bcbu+bcrb+bcen;

dor=rdor+bdor;
crb=rcrb+bcrb;
cbu=rcbu+bcbu;
cen=rcen+bcen;

pda=rd+bd;

if delivery mode frame = "C" then delcode=1;
if delivery mode frame = "D" then delcode=2;
if delivery mode frame = "F" then delcode=3;
if delivery mode frame = "P" then delcode=4;
if delivery_mode_frame = "O" then delcode=5;

if delcode lt 3 then dti=0;
if delcode gt 2 then dti=1;

if    route type = "RES" then rtype num = 1;
if    route type = "BUS" then rtype num = 2;
if    route_type = "MIX" then rtype_num = 3;

SQMILE=     ALAND SQMI;
GSQMILE=ALAND_SQMI+Awater_SQMI;
run;

*** Determining Number of ZIP Days in DOIS/CV Data Set ******;
 data doiszc; set adoiscv;
 proc sort data=doiszc; by zip date;
 proc means noprint; by zip date;
 var street hours;
 output out=doiszdc mean=zm_street_hours;

data a2;
set adoiscv;
year dois   = year(date);
month dois  = month(date);
dow dois    = weekday(date);
dom dois    = day(date);
 attrib  all  label=' ';
 if allied hours 3999 < 0 then allied hours 3999=0;
network travel hrs 3999 =  TRAVEL WITHIN HOURS 3999;
Parcel acct hrs 3999 =  PARCEL HOURS_3999 +     ACCOUNTABLE_HOURS_3999;
Relay hrs 3999 =RELAY HOURS 3999;
travel to from hrs 3999 = TRAVEL FROM HOURS 3999+ TRAVEL_TO_HOURS_3999;
collect blue box hrs 3999 = BLUE COLLECT HOURS_3999;
delivery hrs=street hours- allied hours 3999;
Dvolume = dps+fss+cased letters+cased_flats+sequenced;
Cuslet=(227/12)* Cust Lett;
cusflt = (115/12)*  Cust_Flat;
```

```
cuspcl=cust parc;
colet=(227/12)* CP Lett;
colflt = (115/12)* Cp_Flat;
colpcl=cp parc;
contlet=(227/12)*Cont Lett;
contflt=(115/12)* Cont Flat ;
alllet=cuslet+colet+contlet;
allflat=cusflt+colflt+contflt;
allpcl=cuspcl+colpcl;
Cvolume=cuslet+cusflt+cuspcl+colet+colflt+colpcl+contlet+contflt;
run;

*************************************************************;
** Looking at sample statistics and distributions@ Route Level **;
*************************************************************;
proc means;
var delivery hrs street hours allied hours 3999 CASED_LETTERS CASED_FLATS DPS
FSS SEQUENCED cvolume POSSIBLE_DELIVERIES pda ;

*****************************************;
**  Construction Zip  Day Observations  **;
*****************************************;
proc sort data=a2; by zip date;

proc means noprint; by zip date ;  id month dois dow dois sqmile qsqmile;
var delivery hrs dps fss cased letters cased flats sequenced cvolume
street hours possible deliveries allied hours 3999 POSSIBLE DELIVERIES 3999
    rdor rcbu rcrb rcen bdor bcbu bcrb bcen rd bd dor crb cbu cen pda dti
rtype_num
;
output out=zreq sum = delivery hrs  dps fss cased letters cased flats
sequenced cvolume street hours possible deliveries allied hours 3999
POSSIBLE DELIVERIES 3999 rdor rcbu rcrb rcen bdor bcbu bcrb bcen rd bd dor
crb cbu cen pda dti rtype num
                n=nroutes;
proc means;
*************************************************************;
** Looking at sample statistics and distributions @ ZIP Level   **;
*************************************************************;
proc means;
 data ana; set zreg;

 proc means;
 var  street_hours delivery_hrs dps cased_letters cvolume pda sqmile;
 run;

 data ana1; set ana;
 if street hours le 0 then delete;
 if delivery_hrs le 0 then delete;

proc univariate; var dti;
```

```
 data ana2; set ana1;
 cm=cased letters+cased_flats;
 seq=sequenced;
 cv=cvolume;
 pd=possible_deliveries;
 pd2=pd*pd;
dps2=dps*dps;
cm2=cm*cm;
seq2=seq*seq;
fss2=fss*fss;
cv2=cv*cv;
dpscm=dps*cm;
dpsseq=dps*seq;
dpsfss=dps*fss;
dpscv=dps*cv;
dpspd=dps*pd;
cmseq=cm*seq;
cmfss=cm*fss;
cmcv=cm*cv;
cmpd=cm*pd;
seqfss=seq*fss;
seqcv=seq*cv;
seqpd=seq*pd;
fsscv=fss*cv;
fsspd=fss*pd;
cvpd=cv*pd;
busrat=bd/pda;
mpdp=sqmile/pd;
dt=dti/nroutes;
dt2=dt*dt;
busrat2=busrat*busrat;
mpdp2=mpdp*mpdp;
fssdum=0;
if fss>0 then fssdum=1;
run;

proc means;
var street_hours delivery_hrs dps cm seq fss cv pd dt mpdp busrat nroutes
fssdum;
output out=regmean mean= mstreet hours mdelivery_hrs mdps mcm mseq mfss mcv
mpd mdt mmpdp mbusrat mnroutes mfssdum;
run;

proc reg data=ana2 outest=quadc;

model delivery hrs = fssdum dps dps2 cm cm2 seq seq2 fss pd pd2
                              dpscm  dpspd
                     cmpd
                     fsspd
                     dt dt2 mpdp mpdp2 busrat busrat2 /acov;

data elasquad; merge regmean quadc(drop=_type_);
```

```
pdelh = intercept+fssdum*mfssdum
      + dps*mdps+ dps2*mdps*mdps +
cm*mcm+cm2*mcm*mcm+seq*mseq+seq2*mseq*mseq+fss*mfss+pd*mpd+ pd2*mpd*mpd
                                +dpscm*mdps*mcm+dpspd*mdps*mpd
                     +cmpd*mcm*mpd
                     +fsspd*mfss*mpd

+dt*mdt+dt2*mdt*mdt+mpdp*mmpdp+mpdp2*mmpdp*mmpdp+busrat*mbusrat+
busrat2*mbusrat*mbusrat;

      elasdps= (dps*mdps+2*dps2*mdps*mdps +dpscm*mdps*mcm
+dpspd*mdps*mpd)/pdelh;

      elascm=  (cm*mcm  +2*cm2*mcm*mcm    +dpscm*mdps*mcm
+cmpd*mcm*mpd)/pdelh;

      elasseq= (seq*mseq+2*seq2*mseq*mseq
)/pdelh;

    elasfss= (fss*mfss
+fsspd*mfss*mpd)/pdelh;

      elaspd=  (pd*mpd+ 2* pd2*mpd*mpd     +dpspd*mdps*mpd   +cmpd*mcm*mpd
+fsspd*mfss*mpd )/pdelh;

      elasvol= elasdps+elascm+elasseq+elasfss+elascv;

      elastot=elasvol+elaspd;

mcdps=      3600*elasdps*pdelh/mdps;
mccm=       3600*elascm*pdelh/mcm;
mcseq=      3600*elasseq*pdelh/mseq;
mcfss=      3600*elasfss*pdelh/mfss;
mcpd=       3600*elaspd*pdelh/mpd;

      proc print data=elasquad;

      var mdelivery hrs pdelh elasdps elascm elasseq elasfss elaspd elasvol
elastot mcdps mccm mcseq mcfss  mcpd;

run;
```